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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/621,697	07/17/2003	Sanjay Misra	2003-1657.ORI	1505

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EXAMINER

VORTMAN, ANATOLY

ART UNIT PAPER NUMBER

2835

DATE MAILED: 09/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/621,697	<b>Applicant(s)</b> MISRA, SANJAY	
	<b>Examiner</b> Anatoly Vortman	<b>Art Unit</b> 2835	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 17 July 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5,9 and 10 is/are rejected.
- 7) ☒ Claim(s) 6-8 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>9/5/03</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-5, 9, and 10, are rejected under 35 U.S.C. 102(b) as being clearly anticipated by US/5,660,917 to Fujimori et al., (Fujimori).

Regarding claims 1, 2, 5, and 9, Fujimori disclosed (Fig. 1 or Fig.18 and 19) an apparatus for operably conveying heat, having features as recited in claim 1, including a thermally conductive planar substrate (2 or 2g) and the insert portions (3 or 3g) within a boundary of said substrate (2 or 2g), wherein thermal conductivity of the insert portions (3 or 3g) is at least 2.5 times that of said substrate (see Table 1 which shows that the thermal conductivity of the entire heat conveying apparatus is in the range from 10 to 15 W/m \* K, wherein thermal conductivity of the inserts (3 or 3g) is in the range of about 200 W/m \* K (column 12, line 10)).

Regarding claim 3, Fujimori disclosed that said substrate (2) is made of engineering thermoplastics (column 12, lines 7, 8).

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Regarding claim 4, Fujimori disclosed that said insert portions (3) made of copper (column 19, lines 7+).

Regarding claim 10, Fujimori disclosed (Fig. 18 and 19) a plurality of fins (19) extending outwardly from a second surface of the substrate (2g) with a first surface of said substrate (2g) being operably coupled to the heat source (17).

3. Alternatively, claims 1, 2, 5, 9, and 10, are rejected under 35 U.S.C. 102(e) as being clearly anticipated by US/6,758,263 to Krassowski et al., (Krassowski).

Krassowski disclosed (Fig. 5) a precisely identical structure as recited in the claims.

#### ***Allowable Subject Matter***

4. Claims 6-8 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: regarding claims 6-8, claim 6 recites: “one or more arms extending radially outwardly from a first location”.

The aforementioned limitations in combination with all remaining limitations of claim 6, are believed to render said claim 6 and all claims dependent thereon (claims 7 and 8) patentable over the art of record.

#### ***Conclusion***

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5. The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure:

US/4283464, 4782893, 6680015, 5958572, 5886407, 5494753, 5132776, 2002/0023732, 2004/0036161, DE/3825981, JP/2-256260, and JP/4-99051 disclosed cooling arrangements comprising composite heat sinks / heat dissipating plates having thermally conductive inserts.

Please note, that from the aforementioned references the US/4283464 and the IDS document US/6424531 would have been also sufficient for rejection under 35 USC 102 of at least independent claim 1.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anatoly Vortman whose telephone number is 571-272-2047. The examiner can normally be reached on Monday-Friday, between 10:00 am and 6:30 pm..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Darren Schuberg can be reached on 571-272-2800, ext 35. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>.

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Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AV

A handwritten signature in black ink, appearing to read "A. Vortman", followed by a horizontal line.

Anatoly Vortman  
Primary Examiner  
Art Unit 2835